The Afghanistan Engineering Support Program assembled this deliverable. It is an approved, official USAID document. Budget information contained herein is for illustrative purposes. All policy, personal, financial, and procurement sensitive information has been removed. Additional information on the report can be obtained from Firouz Rooyani, Tetra Tech Sr. VP International Operations, (703) 387-2151.



ENGINEERING SUPPORT PROGRAM

Contract No. EDH-I-00-08-00027-00
Task Order No. 1
WO-LT-0082 AMD 3 - American University 200-Bed
Women's Dormitory
QUALITY ASSURANCE PLAN – REV 2



August 14, 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech, Inc.

AFGHANISTAN ENGINEERING SUPPORT PROGRAM (AESP)

Contract No. EDH-I-00-08-00027-00
Task Order No. 1
WO-LT-0082 AMD 3 for American University 200Bed Women's Dormitory Quality Assurance
Services

QUALITY ASSURANCE PLAN - REV 2

Prepared by: Tetra Tech Inc. under AESP

August 14, 2016

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



EXECUTIVE SUMMARY

The Tetra Tech (Tt) Afghanistan Engineering Support Program (AESP) has been tasked by USAID to provide Quality Assurance (QA) services during the construction of a 200-bed women's dormitory for the American University of Afghanistan (AUAF). The contractor (PEREZ) is the USAID prime contractor for implementation of the designs and construction management of the 200-bed dormitory building at the AUAF. It is Tt's responsibility to review contractor quality assurance/quality control (QA/QC) plans/procedures and project execution to ensure that the contractor is operating in accordance with approved quality standards.

Tt is cognizant of its responsibility to aid in monitoring project costs and schedules. As part of the team consisting of USAID and its implementing partners, the contractors, and the construction management teams, Tt's role is to provide QA services during the period of performance to ensure compliance to the approved design, project specifications and approved standards. Under QA services, Tt shall also be responsible to monitor the progress of work and adherence of contractor QC and construction management teams, contractor's schedule, and all QC activities.

This Quality Assurance Plan shall be the outline for Tt to assess contractor compliance and adherence to plans and specifications as outlined in the approved Project Plans, provided by the construction manager and the relevant contractors. The objective of the QA process is to identify, define, and report any issues that may negatively impact the project.

This document was developed to act as an outline for the activities Tt will perform under the AESP long-term work order 0082 AMD 3 (WO-LT-0082 AMD 3).

In order to meet the needs of USAID, this Quality Assurance Plan outlines the QA activities of AESP in the following areas:

- Pre-construction Activities
- · Design and Drawing Reviews
- Field Observations
- Testing
- Environmental Compliance
- Review of Quality Control Procedures
- Health and Safety Oversight
- Schedule Reviews
- Invoice Reviews
- Factory Quality Assurance
- Site Quality Assurance
- Regular Reporting to USAID

Tetra Tech is aware that quality and compliance cannot be "inspected in" to a product. Quality must be built into the product or service, and therefore must be controlled by the contractor's QC organization. Tt shall be responsible for assessing and assuring that the contractor's materials, quality of work, and the final products comply with the design, project technical specifications, and approved construction, health, safety, and environmental standards. Tt is responsible for providing high quality services to assist and ensure that the project is being constructed in accordance with the approved schedule, budget and quality standards.



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APPENDICES

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1.0 QUALITY ASSURANCE SCOPE

The purpose of Quality Assurance (QA) is to ensure that the contractor is compliant with the approved designs, specifications, quality control, health, safety, and other approved standards during all phases of the project.

This QA plan is intended to provide uniform information to USAID on the procedures and resources that will be employed by Tt during the construction of the 200-bed women's dormitory at AUAF. The QA Plan will be augmented by the Quality Assurance Surveillance Plan (QASP). The QASP provides for specific tasks that will be audited / inspected to established performance standards. These tasks and standards are derived from the contractor's quality control plan and contract documents. The QASP can be found in Appendix A. These plans will provide an effective, consistent, comprehensive, and useful QA program for the project.

2.0 DOCUMENT CONTROL

Distribution of all documents, including recommendations, audits, and inspections, will be exclusively to USAID, unless otherwise authorized by USAID. Anticipating a large volume and coordination of documents among various stakeholders, the scope of work for WO-LT-0082 includes the setup of an Electronic Document Management System (EDMS). Tt will deploy an EDMS Bentley ProjectWise, to efficiently control and manage documentation and work flows between Tt, USAID, Perez, TI, and AUAF. EDMS includes and contains revision controls, as well as file structure and naming standards. An overview of the ProjectWise structure and its capabilities can be found in Appendix B.

2.1 QUALITY ASSURANCE PROCEDURE

Tt will conduct QA utilizing the Performance Management Approach. The Performance Management Approach structures the project around "what" service or quality level is required, as opposed to "how" the contractor should perform the work (i.e., results, not compliance). This QASP will define the performance management approach taken by Tetra Tech to monitor and manage the contractor's performance, in order to ensure the expected outcomes or performance objectives communicated in the Project Work Statement (PWS) are achieved. Performance management rests on developing the ability to review and analyze information generated through performance assessment. The ability to make decisions based on the analysis of performance data is the cornerstone of performance management. This analysis yields information that indicates whether expected outcomes for the project are being achieved by the contractor.

Performance management represents a significant shift from the more traditional QA concepts in several ways. Performance management focuses on assessing whether outcomes are being achieved, and to what extent. This approach moves away from scrutiny of compliance with the processes and practices used to achieve the outcome. A performance-based approach enables the contractor to play a large role in how the work is performed, as long as the proposed processes are within the stated constraints. The only exceptions to process reviews are those required by law (federal, state, and local), and compelling best business practices, such as safety and health. A "results" focus provides the contractor flexibility to continuously respond, improve and innovate over the course of the contract, as long as the critical outcomes expected are being achieved and/or the desired performance levels are being met.

2.2 GENERAL BACKGROUND

USAID is providing assistance to the American University in Afghanistan for the design and construction of a new women's dormitory to house 200 female students on its campus in Kabul, Afghanistan. USAID has entered into a Task Order (TO) Design-Build (D/B) contract with a U.S. based firm (Perez), with the following objectives:





- 1. To design and construct a new, 3000 square meter, three-story women's dorm at the AUAF campus.
- 2. To meet AUAF program criteria.
- 3. To provide a safe, fully functioning dorm building at the earliest possible date.

USAID has contracted with Tetra Tech (Tt), through Long Term Work Order 0082 (WO-LT-0082) AMD 1, to perform technical reviews of Perez's drawings, design calculations, technical specifications, and other design elements. Tt will provide independent QA from Notice to Proceed (NTP) through the end of the WO-LT-0082 AMD 2 Period of Performance (POP).

2.3 QA OBJECTIVES

The objectives of Tetra Tech's QA services for this specific project (AUAF 200 bed dormitory) are outlined as below:

- Assuring USAID-funded infrastructure projects are structurally sound and built according to established engineering standards.
- Assuring the contract is executed on time.
- Assuring the contract is executed within budgetary constraints.
- Assuring the contract is executed to established quality standards.
- Assuring that the work the contractor produces complies with approved design drawings, specifications, and adopted engineering and safety codes and standards mentioned in the contract.

3.0 REPORTING

Reporting responsibilities for the QA process will include the following:

- Non-Conformance Report (NCR) This report will highlight any significant deficiencies that are
 not contractually compliant. NCRs will be issued when deficiencies are observed, and will be
 discussed with contractor QC for rectification. The contractor will be required to respond to the
 NCR within five working days.
- As part of the NCR process, the contractor will be required to respond with a Corrective Action (CA) Plan to rectify the non-conformance. The CA Plan will provide specific detailed steps required to correct the non-conformance, including a schedule of when the non-conformance will be resolved. The NCR will remain open until the deficiency has been corrected, at which time the NCR will be changed from "open" to "resolved/closed". All open NCRs will be tracked on an "Aging" file, within the EDMS system. A unique identification number will be assigned to each NCR. The number will consist of the project ID followed by the work sector, the letters "NCR", the author, and a sequential 5 digit tracking number. Please see Appendix C for the NCR format.
- Daily Reports This report will include all relevant QA activities performed during a single workday, and will be written by the field QA inspector. These reports will be submitted to USAID on a daily basis so that rapidly changing conditions or situations can be responded to quickly. The daily QA reports will include:
 - o Day and date of report
 - Contract award date, construction start date and construction completion dates
 - Progress status of ongoing activities
 - o List of all noted defects, deficiencies, non-compliance issues





- Status of health and safety issues
- Status of environmental issues
- Weather conditions
- List of available QA staff at the site
- o List of delivered materials to the site, including acceptance/rejection status
- List of visitors to the project site
- List of contractors' equipment and machinery at the site
- Status of work (i.e. ongoing, delayed, stopped)
- o Contract award date, construction start date and construction completion dates
- Security issues and incidents
- List of site and lab tests conducted
- Weekly Report This report will comprise all relevant QA activities, including progress updates, analysis, data evaluations, findings and recommendations covering the preceding week time period. The report will also include a photo section with photo-documentation of reported items (ongoing activities, noted defects and non-conforming elements). Daily reports shall be included as appendices to the weekly reports to provide additional reference. The report will be issued on the next day after the close of the reporting period. Each weekly report will have a unique identification number. See Appendix D for the Weekly Report format.
- Monthly Report This report will include the information from the previous weekly reports, as well as new information received in the subsequent week period. Each QA monthly report shall be submitted to USAID ten days after the end of each month, and will have a unique identification number. See Appendix E for the Monthly Report format.

Pre-Substantial Completion Inspection (SCI) and Reporting:

- In the event that the contractor completes a pre-Substantial Completion Inspection, Tt will be
 responsible for participating in this inspection and reviewing the report before it is submitted to
 the USAID Contracting Officer's Representative (COR).
- Substantial Completion report The Substantial Completion Inspection is led by the Tt QA team, and is jointly conducted by the Contractor (PEREZ) QC team, Tt QA team, USAID (if security conditions allow) and AUAF representation after the project is substantially completed. The contractor is responsible for inviting all parties for SCI inspection. When the contractor schedules the SCI inspection, the facility must be ready for occupancy by the end user. At this stage there may be a few minor deficiencies, but no major issues that may stop occupancy by the end user. Tt will use the USAID-requested SCI Report format, including a table of all deficiencies identified as Punch List (PL) items. Tt should record all PL items in this table during the SCI. Perez, AUAF, and Tt must sign off on the SCI, including all minor deficiencies (included as PL items), indicating acceptance or non-acceptance. In the event of any major structural or health and safety issues in the facility, or any issues with major / critical systems, the facility will not be accepted by Tt or USAID. Tt will be responsible for arranging, managing and conducting the SCI Inspection, and reporting back to USAID.
- Tt, after noting all minor deficiencies as PL items with agreement from the contractor, QC member(s) participating in the SCI inspection shall sign on the SCI reporting cover sheet for acceptance or non-acceptance with PL items. Tt shall be responsible to arrange, manage and conduct the SCI inspection and report back to USAID COR on the SCI inspection.





Punch List (PL) Verification Inspection and Reporting OR Final SCI Inspection Report:

- After all PL items have been noted during SCI process, PEREZ will be given up to 30 days for rectification of the PL items. During this time, the COR will follow up with PEREZ for correcting PL items while the Tt QA team will continue to provide QA reporting services, until the PL items are rectified by the contractor. Once the contractor reports completion of the PL items to USAID. The COR will advise the Tt QA team for final SCI inspection. This final inspection will be conducted in a similar manner as the initial SCI inspection. Tt will manage and conduct this final inspection and report back to USAID accordingly
- Warranty acceptance report Before the end of the warranty period of the project (which starts from the date of the final SCI inspection), the contractor will invite USAID and the QA team for a warranty inspection of the project. The COR will advise on the QA team and AUAF representatives who will join the warranty inspection, as scheduled by the contractor. Similarly to Tt's role in the SCI Inspection, the Tt QA team shall be responsible for coordinating, managing and conducting the warranty inspection as team lead should USAID be unable to attend. Similar reporting formats provided by USAID, as for the SCI shall be used for the WI notes and reporting. Tt shall be responsible for attaching a table to it, containing three to five columns to note PL items and photos. Tt shall manage and provide WI reports to USAID within two days of the warranty inspections. The contractor shall be given 30 days for submitting its corrective actions plan and rectify all deficiencies (outstanding PL items).

Final Warranty Inspection (WI) and Reporting:

 Tt shall lead the final WI once the contractor informs USAID of completion/rectification of the Warranty punch list items. Tt shall also be responsible for developing the Final WI report which will be shared with the COR for review and approval within five working days of the inspection.

Miscellaneous Inspections and Reporting:

- Occasionally, the execution of USAID projects and programs require the collection of miscellaneous information, or unforeseen project needs require rapid responses. Should USAID request Tt to inspect and report on certain miscellaneous items related to the AUAF dorm, Tt will accommodate the request(s) within a reasonable timeframe.
- Tetra Tech will meet with USAID under AESP/ESP program meetings on a weekly or bi-weekly basis to discuss the status of work orders and any questions or concerns that might arise regarding QA for the project.

4.0 QUALITY ASSURANCE ACTIVITIES

Tetra Tech will be responsible for the following activities as part of the QA Services requested through this work order.

4.1 PRE-CONSTRUCTION MEETINGS

Tetra Tech will attend pre-construction meetings and/or other meetings as directed by USAID. In addition to other project related topics as requested by USAID, these meetings will provide information on the following topics:

- Job site safety
- Pertinent technical requirements of the specification
- Notification requirements
- Contractor required plans and policies
- Contractor's obligation to provide production and delivery schedules
- Information regarding the contractor's QC organization





- Specification requirements on submittals
- Inform the contractor that prior approval is required on all substitutions upon submittal of written requests. All approvals must also be in writing from USAID.
- Transmittal of required drawings, specifications, permits and any other items required from the contractor should be done at this time
- Establish lines of communication between the Contractor and Tetra Tech personnel
- Anticipated frequency and scope of site visits
- Testing requirements and the preparation and storage of test samples
- Contractor's pre-construction preparations
- Discussion of notable deficiencies in the completion of major milestones.
- Protection and acceptance of construction work and materials.
- Inform USAID COR of any upcoming important issues and activities, such as inspections, meetings etc., in a timely manner.

4.2 DESIGN REVIEWS

Once the design is completed and accepted by USAID,

Tt will be responsible for checking and comparing all design drawings required in the specifications. Drawings will be checked for correct revisions and numbers, as well as conformance with accepted engineering and drafting practices. Deficiencies noted will be shared with USAID and the contractor QC team for corrective actions.

QA subject matter experts (SMEs) will familiarize themselves with the relevant standards, practices, codes, and AUAF project design drawings and specifications prior to performing assigned duties.

4.2.1 Codes and Standards

All codes, regulations and standards referenced in this manual, the TO, the Vertical Structures IQC (VS-IQC), and the contractor's QC plan shall be "as last revised" unless explicitly stated otherwise.

The applicable portions of the codes will be reviewed by Tt as needed to verify compliance by the contractor. Applicable standards referred to in the specification may include, but are not limited to, the following:

- ACI American Concrete Institute
- API American Petroleum Institute
- AWS American Welding Society
- AWWA American Water Works Association
- ANSI American National Standards Institute
- ANST American Society of Non-Destructive Testing
- ASTM American Society for Testing Materials
- AISC American Institute of Steel Construction
- CRSI Concrete Reinforcing Steel Institute
- IBC The International Building Code
- IEC The International Electro-Mechanical Commission
- IEEE The Institute of Electrical and Electronics Engineers





- SSPWC Standard Specification for Public Works Construction
- NFPA 80
- NFPA 13
- Standards and testing methods to include code references in the contract Annex 3.
- IPC International Plumbing Code
- IMC International Mechanical Code

4.3 FIELD OBSERVATIONS

Tetra Tech senior management will perform periodic site visits during the construction life of the project. In addition, full time field inspectors will be assigned to the work site to perform field observations. Additional site QA engineers will be assigned at the site as needed. The purpose of these observations will be to observe and report, corroborate information recorded in the field provided by the contractor QC or Construction management team, and to observe additional facets of the project that may not have been covered under regular field observations and standard field reporting.

In general, the purpose of these observations is to monitor the contractor's daily construction work, quality of materials, and workmanship/quality of equipment installation by the contractor. This will ensure compliance with the project's specifications, and that it meets standard code requirements. Additionally, Tt will monitor implementation of the QC plan, health & safety plan, and environmental plans by the contractor and report any deviations from them to USAID.

4.3.1 Site Visits

The QA engineers shall be available during construction activities to check quality, safety, health and environmental compliance. The site QA engineers' daily responsibilities include, but are not limited to, the following activities:

- Verify and ensure that the quality of materials used meets contract specifications
- Verify the correctness of the quantities used per approved submittals and specifications requirements
- Monitor field testing procedures, including testing frequency and reporting of failed tests to Tt/USAID and the contractor for corrective action
- Verify the quality of construction and installation workmanship, as well as conformity to contract design plans, specifications, and other requirements
- Evaluate progress of work against the approved construction schedule. Report deviations and their causes and recommend corrective actions to USAID.
- Verify security incident reports, weather problems, and any other events that could affect construction schedule, in a timely manner
- Verify the work percentage completed for contractor invoicing and as requested by USAID
- · Report of visitors to the construction site
- Verify materials delivered to the site by the contractor against the approved materials submittals
- Provide any information related to the project to USAID upon request
- Draft daily and weekly QA reports for the project

4.3.2 Pre-Construction QA site visit

QA personnel will visit the project site once the contract has been awarded and the contractor has established field facilities. This initial visit will serve several functions, including:





- An opportunity to discuss job schedules and notifications in an informal manner;
- Discussion of storage and handling of test samples such as concrete or mortar cylinders etc.;
- Reviewing the limits of the work area;
- Meet with the Contractor's QC manager and QC engineers to include other members of the construction team (e.g. subcontracted third party inspectors)

Verbal reports to the Technical Lead as identified in Appendix F shall be made on a regular basis by the field supervisor. In the event of an accident, emergency, or other significant event, communication with the Technical Lead and USAID or VS team lead should be made immediately, and should be documented the same day.

4.4 TESTING

Testing of materials is a reliable QA tool to verify the performance and quality of different construction materials. Most construction materials are required to pass specific tests in order to comply with contract specifications. Testing requirements are listed in the QASP, found in Appendix A.

4.4.1 Test Specimens

Tt QA engineers are responsible for ensuring that testing is executed in accordance with the protocols specified in reference standards and codes in the contract documents, as well as the contractor QC plan. The QA engineers will ensure that test specimens are collected in accordance with standard practices. The QASP, which is part of this QA plan, defines test types, references, and standard testing requirements.

The QA team shall be responsible at random intervals for monitoring the performance of required materials tests. Monitoring may include documenting the test procedures, recording any failures, recommending corrective action, and preparing any required non-conformance reports. Tt will observe the procedures of all tests, including site tests and those performed at the lab.

Tests performed by the contractor will be submitted to Tt for review. In the event of failure, the contractor will propose remedial actions to meet expected standards. Tt shall review the contractor-recommended corrective actions and will provide recommendations to USAID for further actions.

4.5 PHOTOGRAPHS

Tt site QA engineers will provide photo-documentation for daily, weekly, and monthly reports. Photos will be timestamped and will contain descriptive captions. Tt QA engineers will share photos in a timely manner upon USAID request.

4.6 ENVIRONMENTAL COMPLIANCE

Tt will perform a review of the Environmental Management Plan provided by the contractor to ensure that it meets required environmental compliance documentation during the life of the project. Tt will perform periodic field checks for environmental compliance throughout the life of the project, and to ensure the contractor complies with the Environmental Protection Plan (EPP) at the field level. Tt will include observations on environmental issues and compliance in the daily, weekly and monthly reports.

4.7 QUALITY CONTROL MANUAL

The Contractor's finalized QC Plan will be evaluated for compliance with the contract's quality requirements. Tt will monitor implementation of the QC manual by the contractor at the job site during the life of the project. The Tt QA team should verify that the contractor follows QC procedures while executing project activities at the site and all levels.





4.8 HEALTH AND SAFETY

Tetra Tech will review all approved health and safety plans for conformance to relevant specifications. These documents will include contractor-approved site-specific health and safety plans. Tt will verify whether the contractor is following their H&S plans, and verify that the activities are in compliance to the EPP.

4.9 PROJECT SCHEDULE

Tt will maintain a professional scheduling staff to review the contractor and construction manager's schedules to assure that there are no unexplained deviations from the baseline schedule. The primary metrics to be assessed will include percentage of physical completion and resource-loaded percentage complete. In addition to evaluating standard scheduling practices, Tt will assess the contractor's schedule utilizing the DCMA 14 point metric assessment software to help assure accuracy and technical compliance with scheduling mechanics.

The Tt QA team will maintain close observation of the schedule, will discuss schedule issues in weekly site meetings, and make sure that the contractor remains on schedule during the period of performance. Tt will conduct monthly schedule reviews and will share its findings and recommendations with USAID, to enable it to instruct the contractor on correction actions accordingly.

4.9.1 Submittal Reviews

Tt will review the master submittal register periodically to ensure that all submittals required by the contract have been included in the submittals register and are submitted and approved by USAID, with no adverse impacts to the construction schedule. All submittals will be reviewed by Tt to ensure compliance with contract specifications.

The Tt QA team will confirm that all approved submittals are kept at the site in the contractor's QC and design files for verification of materials delivery to the site.

Any material samples submitted by the contractor for review will be reviewed by Tt as per the instructions and procedures available in the technical specifications.

Tt shall review the contractor submittals register. Once a submittal is accepted by Tt, Tt shall provide recommendations to USAID for approval. Similarly, Tt shall track all submittals and shall inform the COR of any issues or delays in submissions by the contractor in a timely manner.

4.10 INVOICE REVIEW

Tt will review project costs and invoices as submitted by the contractor for monitoring of project progress and performance. Tt invoice audits will be provided to the COR, with recommendations for payment or non-payment included. Invoice audits will be conducted within seven days of receipt of invoice from contractor. Verification of completion percentages will be conducted within 48 hours.

4.11 CLOSEOUT PROCEDURE

Tt will review close-out procedures and verify that the contractor follows USAID closeout procedures, including closeout-related submittals such as: as-built drawings, as-built record of materials, equipment/product warranties, O&M manuals, pending RFIs, and GFP disposition, or other similar submittals.

4.12 FACTORY/SITE QUALITY ASSURANCE

Tt will conduct factory and/or site QA audits for equipment and materials, as required by the contract. These QA audit activities relate to the procurement, fabrication, and delivery of structural components, equipment, and materials which are manufactured or fabricated at vendor facilities. For any verification visits out of Afghanistan, Tt will request USAID CO approval in advance.





These activities consist primarily of reviewing specifications; assessing testing protocols; reviewing factory/shop production capabilities and QC programs; witnessing tests; issuing nonconformance reports (NCRs); inspecting material or equipment after receipt; and developing reports as required.

4.12.1 Specifications Review

All formal material submittals will be reviewed by Tt. Standard review topics include:

- Vendor production schedule
- Compliance of material to governing plans and specifications
- Verification of production capability
- Adequate notice for required inspections and tests
- Shipment release and hold points for critical inspections
- Materials samples review

4.12.2 Witnessing of Tests

The QA Engineer will review the test requirements in the contract specifications and relevant standards and codes, as well as the contractor's inspection and test plan. QA personnel will witness sampling and selected production tests, including any significant design tests. The QA personnel will participate in the resolution of any deviations, and will include the test results and findings in a written report with technical recommendations to the COR for further actions. When catalogued (non-custom) equipment is selected, factory shop testing may be omitted with the Design Engineer's approval, provided the appropriate industry testing is performed by the manufacturer. Documentation for this testing shall be provided with the equipment upon delivery or upon request.

4.12.3 Laboratory Reports

Laboratory reports will be transmitted directly to Tt for review. All test results shall be reviewed by Tt, and QA evaluation and comments will be shared with USAID. In the event of a failing test result, Tt QA will share technical findings and recommendations with USAID for further actions. Based on Tt QA recommendations, the COR will instruct the contractor to make corrective actions. The contractor's corrective measures shall be reviewed by Tt, and technical comments and recommendations shall be provided to USAID.









ENGINEERING SUPPORT PROGRAM

Contract No. EDH-I-00-08-00027-00
Task Order No. 1
WO-LT-0082 AMD 3 - American University 200-Bed
Women's Dormitory
QUALITY ASSURANCE SURVEILLANCE PLAN
(QASP)



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AFGHANISTAN ENGINEERING SUPPORT PROGRAM

Contract No. EDH-I-00-08-00027-00 Task Order No. 1 WO-LT-0082 AMD 3 American University 200-Bed Women's Dormitory

QUALITY ASSURANCE SURVEILLANCE PLAN (QASP)

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APPENDICES

APPENDIX A – PERFORMANCE REQUIREMENTS SUMMARY

APPENDIX B – QUALITY ASSURANCE MONITORING FORM





1.0 INTRODUCTION

This Quality Assurance Surveillance Plan (QASP) is pursuant to the requirements listed in the performance work statement (PWS) entitled WO LT0082 AMD3. This plan sets forth the procedures and guidelines Tetra Tech will use in ensuring the required performance standards or services levels are achieved by the contractor.

1.1 Purpose

The purpose of the QASP is to describe the systematic methods used to monitor performance and to identify the required documentation and the resources to be employed. The QASP provides a means for evaluating whether the contractor is meeting the performance standards/quality levels identified in the PWS and the contractor's Quality Control Plan (QCP), and to ensure that the government pays only for the level of services received.

This QASP defines the roles and responsibilities of all members of the integrated project team (IPT), identifies the performance objectives, defines the methodologies used to monitor and evaluate the contractor's performance, describes quality assurance documentation requirements, and describes the analysis of quality assurance monitoring results.

1.2 Performance Management Approach

The Performance Management Approach structures the project around "what" service or quality level is required, as opposed to "how" the contractor should perform the work (i.e., results, not compliance). This Quality Assurance Surveillance Plan (QASP) will define the performance management approach taken by Tetra Tech to monitor and manage the contractor's performance to ensure the expected outcomes or performance objectives communicated in the PWS are achieved. Performance management rests on developing a capability to review and analyze information generated through performance assessment. The ability to make decisions based on the analysis of performance data is the cornerstone of performance management; this analysis yields information that indicates whether expected outcomes for the project are being achieved by the contractor.

Performance management represents a significant shift from the more traditional quality assurance (QA) concepts in several ways. Performance management focuses on assessing whether outcomes are being achieved and to what extent. This approach migrates away from scrutiny of compliance with the processes and practices used to achieve the outcome. A performance-based approach enables the contractor to play a large role in how the work is performed, as long as the proposed processes are within the stated constraints. The only exceptions to process reviews are those required by law (federal, state, and local) and compelling business situations, such as safety and health. A "results" focus provides the contractor flexibility to continuously improve and innovate over the course of the contract as long as the critical outcomes expected are being achieved and/or the desired performance levels are being met.

1.3 Performance Management Strategy

The contractor is responsible for the quality of all work performed. The contractor measures that quality through the contractor's own quality control (QC) program. QC is work output, not workers, and therefore includes all work performed under this contract regardless of whether the work is performed by contractor employees or by subcontractors. The contractor's QCP will set forth the staffing and procedures for self-inspecting the quality, timeliness, responsiveness, customer satisfaction, and other performance requirements in the PWS. The contractor will develop and implement a performance management system with processes to assess and report its performance to the designated government representative (Tetra Tech). The contractor's QCP will set forth the staffing and procedures for self-inspecting the quality, timeliness, responsiveness, customer satisfaction, and other performance requirements in the PWS. This QASP enables the government to take advantage of the contractor's QC program.





Tetra Tech will monitor performance and review performance reports furnished by the contractor to determine how the contractor is performing against communicated performance objectives. The contractor will be responsible for making required changes in processes and practices to ensure performance is managed effectively.

2.0 ROLES AND RESPONSIBILITIES

2.1 The Contracting Officer

The contracting officer (CO) is responsible for monitoring contract compliance, contract administration, and cost control and for resolving any differences between the observations documented by Tetra Tech and the contractor. The CO has designated COR as the government authority for performance management.

2.2 The Contracting Officer's Technical Representative

The contracting officer's technical representative (COR) is designated in writing by the CO to act as his or her authorized representative to assist in administering a contract. COR limitations are contained in the written appointment letter. The COR is responsible for technical administration of the project and ensures proper government (Tetra Tech) surveillance of the contractor's performance. Any changes that the contractor deems may affect contract price, terms, or conditions shall be referred to the CO for action. Tetra Tech will administer the QASP in conjunction with such guidance / direction as may be provided by the COR.

3.0 IDENTIFICATION OF REQUIRED PERFORMANCE STANDARDS/QUALITY LEVELS

The required performance standards and/or quality levels are included in the PWS and in Appendix A, "Performance Requirements Summary."

4.0 METHODOLOGIES TO MONITOR PERFORMANCE

4.1 Surveillance Techniques

In an effort to maximize coverage across the Project core competencies, simplified surveillance methods will be used by the government to evaluate contractor performance when appropriate. The primary methods of surveillance are:

- Random inspection for select categories.
- Percentage based inspection for select categories.
- 100% Inspection for select categories.
- Announced inspections.
- Unannounced Inspection

4.2 Acceptable Quality Levels

The acceptable quality levels (AQLs) included in Attachment 1, Performance Requirements Summary Table, for contractor performance are structured to allow the contractor to manage how the work is performed. For certain critical activities such as those involving adherence to design specification, testing, budget execution and schedule, the desired performance level is established at 100 percent. Other levels of performance are keyed to the relative importance of the task to the overall mission performance.





5.0 QUALITY ASSURANCE DOCUMENTATION

5.1 The Performance Management Feedback Loop

The performance management feedback loop begins with the communication of expected outcomes. Performance standards are expressed in the PWS and are assessed using the performance monitoring techniques shown in Attachment 1.

5.2 Monitoring Forms

The government's QA surveillance, accomplished through Tetra Tech, will be reported using the monitoring forms in Appendix 2. The form, when completed, will document the government's assessment of the contractor's performance under the contract to ensure that the required results are being achieved.

Tetra Tech will retain a copy of all completed QA surveillance forms.

6.0 ANALYSIS OF QUALITY ASSURANCE ASSESSMENT

6.1 Determining Performance

As the government's representative Tetra Tech shall use the monitoring methods cited to determine whether the performance standards/service levels/AQLs have been met. If the contractor has not met the minimum requirements, they may be asked to develop a corrective action plan to show how and by what date they intend to bring performance up to the required levels. Notification of non-performance will typically be provided to the contractor and the COR in the form of a non-conformance report (NCR).

6.2 Reporting

In accordance with WO LT0082 AMD3 PWS Tetra Tech will prepare a written report for the COR summarizing the overall results of the quality assurance surveillance of the contractor's performance. This written report and the completed quality assurance monitoring forms (Attachment 2), will become part of the QA documentation. It will enable the government to demonstrate whether the contractor is meeting the stated objectives and/or performance standards, including cost/technical/scheduling objectives.

6.3 Reviews and Resolution

The COR may require the contractor's project manager, or a designated alternate, to meet with Tetra Tech and or government personnel as deemed necessary to discuss performance evaluation. The COR will define a frequency of in-depth reviews with the contractor, including appropriate self-assessments by the contractor. The agenda of the reviews may include:

- Monthly performance assessment data and trend analysis
- Issues and concerns of both parties
- Projected outlook for upcoming months and progress against expected trends, including a corrective action plan analysis
- Recommendations for improved efficiency and/or effectiveness

Tetra Tech will coordinate and communicate with the contractor to resolve issues and concerns regarding marginal or unacceptable performance.

Tetra Tech, COR and contractor should jointly formulate tactical and long-term courses of action. Decisions regarding changes to metrics, thresholds, or service levels should be clearly documented and approved by the appropriate government authority.









URVEY PERIOD:							
SURVEILLANCE METHOD (Check):							
☐ Random Sampling ☐ 100% Inspection Complaint	☐ Periodic Inspection ☐ Customer						
LEVEL OF SURVEILLANCE (Check):							
☐ Monthly ☐ Quarterly ☐ As needed							
PERCENTAGE OF ITEMS SAMPLED DURING	SURVEY PERIOD:%						
PERCENTAGE OF ITEMS SAMPLED DURING ANALYSIS OF RESULTS: Observed Service Provider Performance Me	SSURVEY PERIOD:% easurement Rate:%						
PERCENTAGE OF ITEMS SAMPLED DURING	SSURVEY PERIOD:% easurement Rate:%						
PERCENTAGE OF ITEMS SAMPLED DURING ANALYSIS OF RESULTS: Observed Service Provider Performance Me	easurement Rate:% Meets Standards Does Not Meet Standards						
PERCENTAGE OF ITEMS SAMPLED DURING ANALYSIS OF RESULTS: Observed Service Provider Performance Me Service Provider's Performance (Check):	easurement Rate:% Meets Standards Does Not Meet Standards						
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http://afghanistan.usaid.gov





Projectavise A Proven System of Collaboration Servers and Services for Infrastructure Projects





Market Facts

Enterprise Scale:

- ProjectWise enterprises range from tens of users to hundreds of thousands
- Representative ProjectWise accounts average over 1000 users
- Representative ProjectWise user organizations manage over 400,000 documents averaging 7.5 MB each

System of Choice for:

- · Half of the U.S. state departments of transportation
- 24 of the ENR Top 25, 42 of the ENR Top 50, and 67 of the ENR Top 100 Design Firms
- · 29 of the ENR Top 50 Design-Build Firms
- 234 of the Bentley Infrastructure 500 Top Owners

Proven, Reliable, Broad Industry Adoption

ProjectWise is used in 92 countries by many of the world's leading infrastructure organizations. A sampling appears below.



"We've made ProjectWise our global work-sharing platform to streamline team collaboration on projects of all sizes and complexities. We're really happy with the way it allows widely distributed project teams to confidently share and manage project data. In addition, our strategic partnership with Bentley enables us to develop and implement world-class solutions that meet the needs of our integrated project teams around the globe."

Bruce A. Strupp/ATL, CPE-Design Technology Director, CH2M HILL

"We currently utilize ProjectWise in 32 projects, across more than 1.300 users, representing \$3 billion in construction costs alone. As most of the design data we currently manage is Revit based, ProjectWise V8i (SELECTseries 2) with Revit integration, as well as delta file transfer, will further enhance our Revit community by incorporating their workflows with supercharged network performance. ProjectWise has been tremendous in helping us collaborate with our business partners."

Radhika Menon, CIO, DPR Construction



How Much Is Inefficient Collaboration Costing You?

Is Conventional Document Management the Answer? Think Again...

Is your organization trying to use conventional document management or collaboration software to support project teams?

These "generic" systems aren't set up to address the challenges specific to infrastructure project workflows. They can't meet the unique requirements of securely managing, sharing, and distributing work-in-progress architectural, engineering, and construction content. They aren't integrated with the design, analysis, and simulation applications commonly used by your teams, and aren't suited to properly handle the sets of large and interrelated files distributed across team members in multiple geographies, including multiple countries and continents as organizations seek to deploy 24/7 engineering.

What's more, document management systems don't offer capabilities for effectively and efficiently publishing information to project stakeholders, or for the demanding review and markup needs unique to infrastructure projects.

As a result, most teams struggle with ineffective collaboration, work sharing, and communication — increasing time spent moving talent to project locations, driving up costs, increasing risk, and hurting the bottom line. It's well understood that as much as 40 percent of an engineer's working day can be spent on looking for and validating specific information and files for use, and in ensuring that the results of the work are properly communicated and distributed — all because there's no single, trusted, and secure environment for collaboration and work sharing. But this is just the

tip of the iceberg when it comes to work-in-progress inefficiencies. For example, how many times have:

- Your teams sent design files that were too large or which reviewers couldn't open because of the file format?
- The inherently complex relationships among files in your engineering content been broken, endangering project quality and schedules?
- Your distributed, multidisciplinary teams been unable to work on projects simultaneously, rather than sequentially, limiting your ability to meet tight deadlines?
- You struggled to get stakeholder feedback faster and more frequently during design and construction, or perhaps even lost valuable feedback that later resulted in costly change orders?

Given the unique challenges of engineering information management and collaboration for infrastructure projects, what's needed is information mobility in a secure, interoperable environment. Such an environment empowers collaboration, in the context of the entire project, including the input of all disciplines, and with continuity of information across all project teams, project stakeholders, and project phases, including design, engineering, construction, and operations—so information "hand-off" and "handover" become a positive "hands-on" experience.

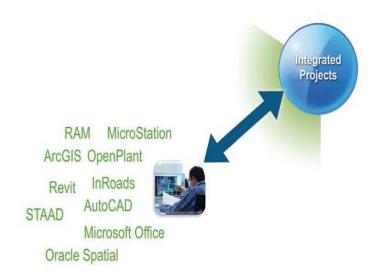
ProjectWise Secures Information Mobility

The ProjectWise system of collaboration servers and services ensures information mobility with integrity for AECO information used in the design and Continuity in construction of infrastructure projects while the work is in progress. It provides enterprise lifecycles scalable, industry-proven, interoperable AECO work-sharing, content reuse, and dynamic feedback capabilities that are so essential to leveraging information modeling through integrated projects for high-performing, Content intelligent infrastructure. Stakeholders Reuse ProjectWise helps you achieve: · Organizational Agility in a Managed Environment: Create and manage ongoing work-product effectively - where the right people quickly and reliably accelerate work in progress using infrastructure tools and workflows of choice. Maximized Value Across the Enterprise: Inform Integrated **Dynamic** project stakeholders and enterprise systems in a more Work **Projects** consistent, timely, and predictable manner using Sharing Feedback high-impact deliverables. Timely and Actionable Participation: Synchronize comments to resolve issues quickly and effectively in a closed loop, returning feedback in context to all the relevant designers so as to **Design Team** Reviewers be actionable. Timely and actionable Organizational mobility in a managed environment participation



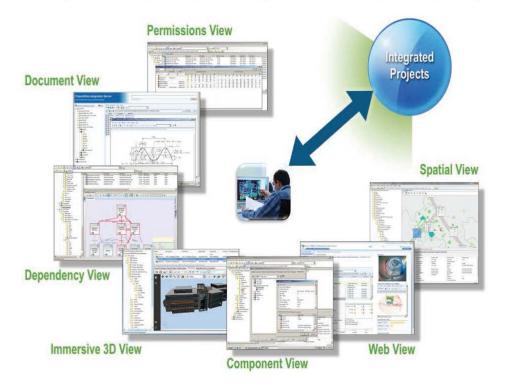
Work Sharing: Create and Manage Ongoing Work Efficiently

 With ProjectWise, everyone can collaborate on projects, which is how today's interdisciplinary project teams must work to meet the challenges of sustaining infrastructure. Distributed team members can use their own applications and file formats in their own locations. And through ProjectWise, they can quickly find, share, and interact with appropriately managed, interrelated engineering content using their preferred workflows.



With the smart work sharing that ProjectWise facilitates, your team realizes the higher productivity, increased project performance, and improved project quality that result from the ability to automate the management of complex relationships among documents and the countless components within them; share large work-in-progress datasets across offices in real time, instantly seeing the impact of design changes made by others; automatically enforce document standards across distributed teams; control document access; and make it easy to search at

the file and component level. ProjectWise also provides powerful work-sharing capabilities such as spatial view for map-based navigation, web view for online browser access, permissions view for access control management, dependency view for understanding and managing complex file relationships, component view to search for information across file types, and 2D and 3D views without needing the authoring applications. These empower team members to interact with project information in views that directly relate to their specific task requirements.







NON-CONFORMANCE REPORT

NCR No.		Status:	Ongoing \square	Resolved						
Project Title:										
Contractor:		Project Location:								
Tt POC:		Report Date:								
Funding Organization:	USAID									
NCR Subject:										
Description: Communication with Contractor QC:										
Findinas (inclu	ding references):									
Findings (including references):										
Expected Corre	ective Actions:									
Response:	Response:									





United States Agency for International Development Office of Economic Growth and Infrastructure Afghanistan Engineering Support Program

Weekly QA Report No. XX	Project: WO-LT-0082 AMD3 - American University 200-Bed Women's Dormitory QA Services	
Date:	Report Duration:	
March 16, 2016	xx, 2016 through xxx, 2016	

PRESENTED TO

United States Agency for International Development (USAID)
Office of Economic Growth and Infrastructure (OEGI)

Great Massoud Road Kabul, Afghanistan

PRESENTED BY

Tetra Tech, Inc.
Afghanistan Engineering Support Program
Contract No. EDH-I-00-08-00027-00
Task Order No. 1

Shash Darak Kabul, Afghanistan

Tt Prepared by:

Name: xxx Title: XXX Date: **03/16/2016**

Tt Reviewed by:

Name: xxx Title: XXX Date: 03/16/2016

DISCLAIMER

EXECUTIVE SUMMARY

The following is a summation of observations, work accomplished, and problems encountered during the reporting period XXX, 2016 through XXX, 2016.

construction Activities

Design and Drawing Review

Field Observations / Site Visit Details

Contractor Staffing Levels

Quality Control Procedure Review

Health and Safety Oversight

Security

Environmental

Schedule Review

Invoice Verification

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6.2 SECURITY

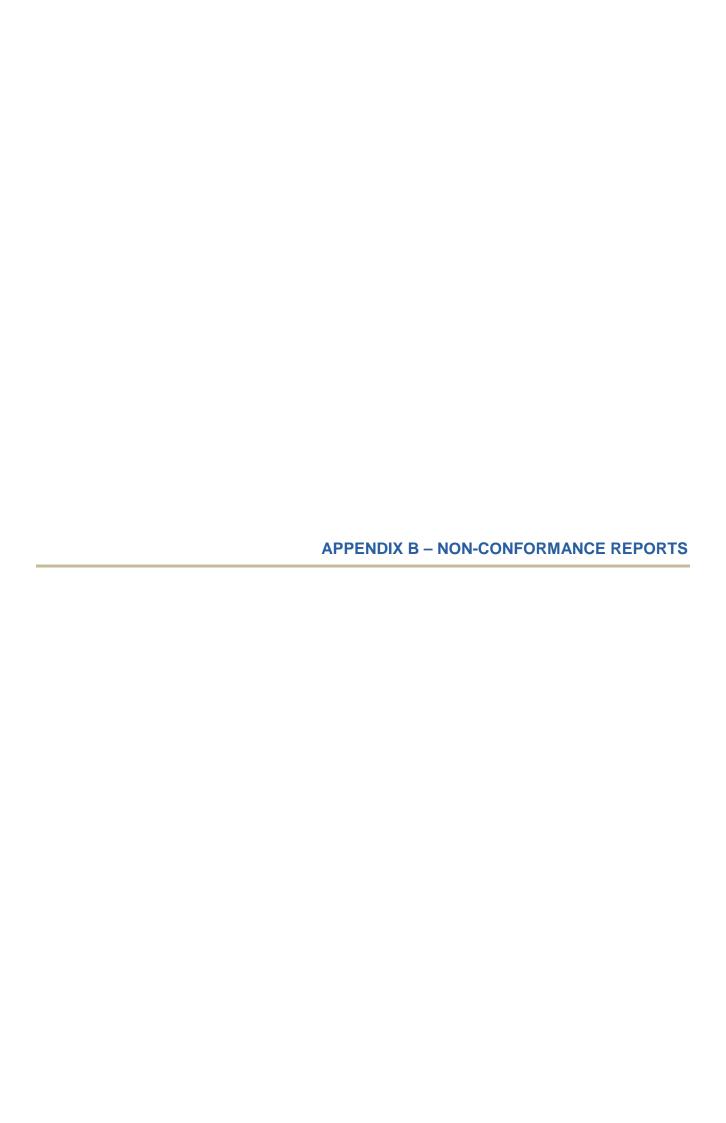
7.0 SCHEDULE REVIEW

8.0 INVOICE VERIFICATION

9.0 FACTORY AND SITE QUALITY ASSURANCE











United States Agency for International Development Office of Economic Growth and Infrastructure Afghanistan Engineering Support Program

Monthly QA Report No. XX	Project: WO-LT-0082 AMD3 - American University 200-Bed Women's Dormitory QA Services	
Date:	Report Duration:	
March 16, 2016	xx, 2016 through xxx, 2016	

PRESENTED TO

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Great Massoud Road Kabul, Afghanistan

PRESENTED BY

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Tt Prepared by:

Name: xxx Title: XXX Date: **03/16/2016**

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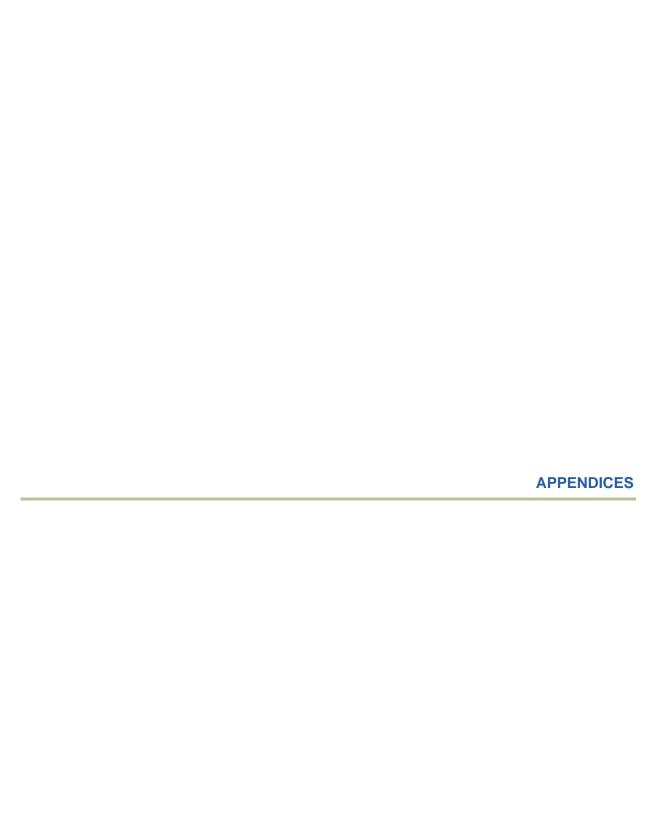


6.2 SECURITY

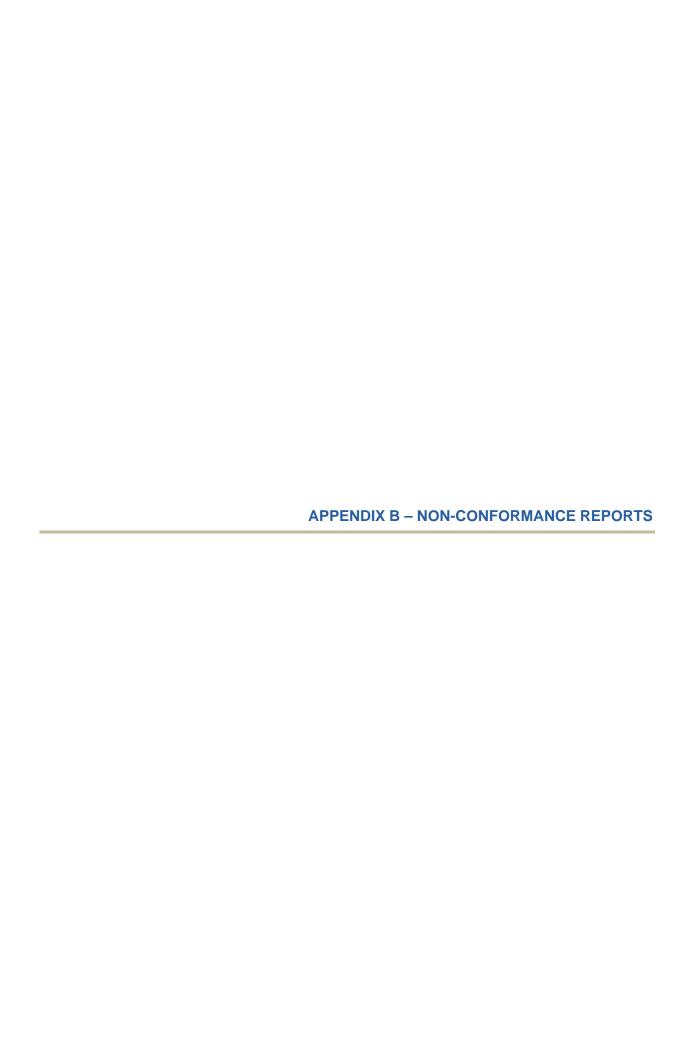
7.0 SCHEDULE REVIEW

8.0 INVOICE VERIFICATION

9.0 FACTORY AND SITE QUALITY ASSURANCE











Name	Specialty	Expat / LN	Role
	Civil Engineer	LN	Project Lead / Office Project Engineer.
	Civil/Struct Engineer	Expat	Alternate Project Lead / Technical Reviewer
	Civil Engineer	LN	Site QA Resident Engineer / Technical Reviewer
	Civil Engineer	LN	Reserve QA Resident Engineer/ Technical Reviewer
	Senior Civil Engineer	LN	Technical Reviewer/Occasional Site QA Engineer
	Civil/Structural Engineer	LN	Technical Reviewer/ Occasional Site QA Engineer
	Deputy Director of Quality Assurance	Expat	Office QA Advisor
	Health, Safety & Environmental Manager	LN	HSE Inspector and/or Monitor / Technical Reviewer
	Junior Civel Engineer	LN	Technical Reviewer/ Occasional Site QA Engineer
	Electrical Engineer	LN	Technical Reviewer/ Occasional Site QA Engineer
	Electrical Engineer	LN	Technical Reviewer/ Occasional Site QA Engineer
	QA Engineer	LN	Site QA Engineer
	QA Engineer	LN	Site QA Engineer
	QA Engineer	LN	Site QA Engineer
	QA Engineer	LN	Site QA Engineer
	Reachback PM	Expat	Rb Project Lead
	Architect	Expat	Rb Architect

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